### NRM 52 Course Outline as of Spring 2001

# **CATALOG INFORMATION**

Dept and Nbr: NRM 52 Title: FOREST SURVEYING Full Title: Park and Woodland Surveying Last Reviewed: 11/27/2000

Units		Course Hours per Week		Nbr of Weeks	<b>Course Hours Total</b>	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	10	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	FOR 52

### **Catalog Description:**

Measurement of distance, direction and elevation using basic surveying equipment, including the abney, clinometer, compass, engineer's tape and level rod. The interpretation and use of topographic maps for wildland navigation.

**Prerequisites/Corequisites:** 

### **Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100 and completion of AG 78.

### **Limits on Enrollment:**

### **Schedule of Classes Information:**

Description: A basic surveying course involving the measurement of distance, direction, & elevation under forest field conditions. (Grade Only) Prerequisites/Corequisites: Recommended: Eligibility for ENGL 100 or ESL 100 and completion of AG 78. Limits on Enrollment: Transfer Credit: CSU;

# **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

AS Degree: CSU GE:	Area Transfer Area	1		Effective: Effective:	Inactive: Inactive:
<b>IGETC:</b>	Transfer Area			Effective:	Inactive:
CSU Transfer	:Transferable	Effective:	Fall 1981	Inactive:	Fall 2011
UC Transfer:		Effective:		Inactive:	

## CID:

### **Certificate/Major Applicable:**

Certificate Applicable Course

# **COURSE CONTENT**

### **Outcomes and Objectives:**

The student will:

- 1. Know and be able to describe the United States public land survey system.
- 2. Organize and assemble accurate surveying field notes.
- 3. Prepare planimetric and topographic maps from field notes.
- 4. Understand and competently operate surveying equipment and instruments (compasses, steel tapes, levels, abneys, clinometers, etc.)
- 5. Demonstrate accurate field measurements of distance, direction and elevation.
- 6. Comprehend and demonstrate basic surveying computations.

## **Topics and Scope:**

- I. Introduction and terminology
  - A. Surveying and forest surveying defined
  - B. Uses of survey information
  - C. Equipment; uses and limitations
  - D. Field notes
- II. Public land survey system
  - A. History
  - B. Subdivisions
  - C. Use in the legal description of rural property
- III. Measurement of horizontal distance
  - A. Terminology and definitions
  - B. Pacing
  - C. Steel tapes
- IV. Measurement of direction
  - A. Terminology and definitions
  - B. Hand compass

- C. Staff compass
- D. Reddi-mapper
- V. Measurement of vertical distance
  - A. Terminology
  - B. Aneroid barometer
  - C. Abney
  - D. Clinometer
  - E. Differential leveling
- VI. Mapping
  - A. Types of maps
  - B. Preparation of maps from field notes
  - C. Reading, interpreting and using contour maps

# Assignment:

Students will be required to complete:

- 1. Reading assignments that will average 10 pages per week.
- 2. Written and laboratory field assignments approximately 12 assignments during the semester.
- 3. Demonstrations (field) of use of surveying equipment.
- 4. An accurate and up-to-date field surveying notebook approximately
  - 25 pages of measurements and computations during semester.
- 5. Approximately five practice sets of survey computations during the semester.
- 6. A planimetric (or topographic) map constructed from field measurements.

The method of instruction shall be a combination of lecture, discussion, written in-class and out-of-class assignments in addition to hands on laboratory exercises.

# Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Field work, Lab reports, Exams

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances, Field work

Writing 0 - 0%

Problem solving 70 - 70%

Skill Demonstrations 30 - 30% None

Exams 0 - 0%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

None

Other Category 0 - 0%

#### **Representative Textbooks and Materials:**

WILSON, R.L. - ELEMENTARY FOREST SURVEYING AND MAPPING 1974 OREGON STATE UNIVERSITY PRESS 183 PP